

Examiner Chester T. Barry  
Appln. of Redmon et al.  
Ser. No.: 10/667,893  
Amendment of 12/18/2006

## REMARKS

Applicants respectfully request continued examination of this application in light of this amendment.

This amendment retains claims 1-4, allowed on September 19, 2006, which Applicants continue to believe are patentable. New claims 5-80 are added by this amendment. New claims 5-8 are also believed to be patentable and to reflect in different language and scope basic features which rendered claims 1-4 allowable. The remaining new claims 9-80 are dependent from certain of claims 1-8. Support indications for all of the new claims are provided in an attached table of support indications.

This amendment amends the Summary of the Invention portion of the description to conform the first and third aspects described therein to, substantially, the language of allowed claims 1-4. The Summary has also been amended to conform the second and fourth aspects substantially to the texts of new claims 5-8. Applicants believe that the support indications which their table provides for claims 5 and 7 support the content of the amendments to the second and fourth aspects.

Applicants also attach an IDS (Information Disclosure Statement) on Form PTO/SB/08A. Two U.S. Patents (3,810,738 and 4,783,750) and two

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foreign language documents (DE A 3 128 439 and EP 0 414 182) are included in the IDS.

Applicants have only an abstract of DE 3 128 439, and it is attached. That abstract, which is in English, represents the only concise statement (37 CFR 1.98) Applicants have with respect to the disclosure of that document.

The other foreign language document is EP 0 414 182. Its full text and drawings and a translation are filed herewith. This document was discussed by Hallas in DE 42 29 550, previously cited and discussed by Applicants in this prosecution. Applicants' concise statement for this document is based on Figure 1 and its related text. These appear to show batch determinations of biochemical  $O_2$  consumption rates being made on wastewater and/or culture media in a closed laboratory vessel using a DO probe connected with a measurement and control computer which records such rates based on changes in DO over time.

Applicant's counsel is not aware of any obstacle to the continuing allowability of the application. However, if there is any concern on the part of the Examiner, the opportunity to discuss same in an interview would be sincerely appreciated.

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Ser. No.: 10/667,893  
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A fee calculation sheet for the new claims and credit card payment authorization forms for the new claim filing fees and the accompanying request for continued examination are attached. Any omission or deficiency of fees may be charged, and any excess payment may be credited, to deposit account No. 50-3730 of the undersigned. An extra copy of this page for use by the Finance Branch is attached.

Respectfully submitted,



Dated: December 18, 2006

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## TABLE OF SUPPORT INDICATIONS FOR CLAIMS 5-80

Notations such as "67/12-15" refer to page 67, lines 12-15; "same" indicates that the support indication(s) for a particular claim is/are the same as for the next preceding claim.

### Claim 5:

"continuing control"-67/12-15

"need for oxygen repeatedly increases and decreases "-25/7-12

"flow control element to supply ... oxygen-containing gas "-16/18-20

"DO (dissolved oxygen) data correlative with varying DO levels in the wastewater "-10/16-18

"and/or performance data correlative with varying ability of the gas supply system to dissolve oxygen in the wastewater"-22/4-8

"generating control values in the control system derived at least in part from (a) the offgas data and (b) the DO data and/or performance data"-22/48

"using such control values to generate control signals"-24/17-18

"to cause the at least one flow control element to cause varying flows of oxygen- containing gas"-16/18-20

"correlative with the varying consumption of oxygen by the biological process"-4/11-17

"adjusted to"-24/19-22

"cause wastewater DO levels to move toward, return to or be maintained at a target value"-10/18-24; 24/7

"compensate for the varying ability of the gas supply system to dissolve oxygen in the wastewater"-22/4-8 and 24/19-22

### Claim 6:

"generating control values in the control system derived at least in part from the offgas data, DO data and performance data and using such

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values to generate control signals"-21/13-16, 22/4-8 and 23-24, and 24/8-9 and 17-19

"to cause the at least one flow control element to provide flows of oxygen-containing gas"-16/18-20

"adjusted to"-24/19-22

"(a) cause wastewater DO levels to move toward, return to or be maintained at a target value"-10/18-24; 24/7

"(b) compensate for the varying ability of the gas supply system to dissolve oxygen in the wastewater"-22/4-8 and 24/19-22.

Claim 7:

See support indications for claim 5 and the following:

"the apparatus comprises at least one DO (dissolved oxygen) detector to provide, in the control system, DO data reflecting DO levels in the wastewater"-6/15-18

"the controller contains or has access to code which, with the aid of the offgas data and DO data, the controller defines varying control values"-6/20-24

"comprising separate or combined"-69/14-20

"requirements control values correlative with the repeatedly fluctuating need for oxygen-containing gas flow to support the biological process"-74/10-12

"DO control values that are correlative with such varying positive or negative adjustments of oxygen-containing gas flow sufficient to cause the wastewater DO levels to move toward, return to or be maintained at a target value"-71/3-6

"the at least one flow control element is connected with the controller to receive and act in response to control signals in the control system based at least in part on said control values to supply an increasing and decreasing flow of oxygen-containing gas through the gas supply system into the wastewater in the at least one plant processing tank"-16/12-15 and 18-20

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Ser. No.: 10/667,893  
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Claim 8:

"the controller contains or has access to code which, with the aid of performance data, the controller defines performance values that are correlative with additional oxygen-containing gas flow adjustments needed to compensate for varying ability of the gas supply system to dissolve oxygen in the wastewater"-15/23 through 16/3: 22/4-8 and 24/19-22.

Claim 9: 7/12-13

Claim 10: 7/16

Claim 11: 7/17

Claim 12: 7/18-19

Claim 13: same

Claim 14: 7/20-21

Claim 15: 7/22-24

Claim 16: 7/24-25

Claim 17: 7/25-26

Claim 18: 8/1-2

Claim 19: 8/2-3

Claim 20: 8/3-4

Claim 21: 8/5-6

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Ser. No.: 10/667,893  
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Claim 22: 8/6-7

Claim 23: 8/8-9

Claim 24: 8/10-12

Claim 25: 8/13-15

Claim 26: same

Claim 27: 8/16-18

Claim 28: same

Claim 29: 8/19-22

Claim 30: same

Claim 31: 9/3-4

Claim 32: same

Claim 33: 9/5-7

Claim 34: same

Claim 35: 9/15-20, 28/13-15 and 69/14-17

Claim 36: same

Claim 37: 9/19-20

Claim 38: same



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Claim 39: 9/21-22

Claim 40: same

Claim 41: 9/23-24

Claim 42: same

Claim 43: 10/14-15

Claim 44: 10/16-17

Claim 45: 10/18-19

Claim 46: 10/22-26

Claim 47: 11/1-3

Claim 48: 11/16-25

Claim 49: same

Claim 50: 11/27 through 12/2

Claim 51: 12/3-12

Claim 52: same

Claim 53: 13/3-11

Claim 54: same

Claim 55: 13/12-17

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Claim 56: 13/18-20

Claim 57: same

Claim 58: 13/22-26

Claim 59: same

Claim 60: 12/27 through 14/8

Claim 61: same

Claim 62: 14/9-12

Claim 63: same

Claim 64: 22/4-8, 14/13-22

Claim 65: 14/16-18

Claim 66: same

Claim 67: same

Claim 68: based on allowed claim 1, clauses C1, C2, D1 and D2

Claim 69: same

Claim 70: same

Claim 71: same as above plus portions of allowed claim 6

Claim 72: same

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Claim 73: see above support indications for claim 6

Claim 74: same

Claim 75: 16/6-14

Claim 76: 16/15

Claim 77: 16/16

Claim 78: 16/17-18

Claim 79: 16/19-22

Claim 80: 17/9-10